ANNEXURE. A.

INTEREST AND ANNUITY TABLES.

AMOUNT OF 1 RUPEE IMPROVED AT COMPOUND INTEREST FOR A GIVEN NUMBER OF YEARS.

Years	3 per cent	3¼ per cent	3½ per cent	4 per cent	4½ per cent	5 per cent	5½ per cent	6 per cent	6¼ per cent	6½ per cent	7 per cent	Years
1	1·0300	1·0313	1·0350	1·0400	1·0450	1·0500	1·0550	1·0600	1·0625	1·0650	1·07	1
2	1·0609	1·0635	1·0712	1·0816	1·0920	1·1025	1·1130	1·1236	1·1289	1·1342	1·1449	2
3	1·0927	1·0967	1·1087	1·1249	1·1412	1·1576	1·1742	1·1910	1·1995	1·2079	1·2250	3
4	1·1255	1·1310	1·1475	1·1699	1·1925	1·2155	1·2388	1·2625	1·2744	1·2865	1·3108	4
5	1·1593	1·1663	1·1877	1·2167	1·2462	1·2763	1·3070	1·3382	1·3541	1·3701	1·4026	5
6	1·1941	1·2028	1·2293	1·2653	1·3023	1·3401	1·3788	1·4185	1·4387	1·4591	1·5007	6
7	1·2299	1·2404	1·2723	1·3159	1·3609	1·4071	1·4547	1·5036	1·5286	1·5540	1·6058	7
8	1·2668	1·2791	1·3168	1·3686	1·4221	1·4775	1·5347	1·5938	1·6242	1·6550	1·7182	8
9	1·3048	1·3191	1·3629	1·4233	1·4861	1·5513	1·6191	1·6895	1·7257	1·7626	1·8385	9
10	1·3439	1·3603	1·4106	1·4802	1·5530	1·6289	1·7081	1·7908	1·8335	1·8771	1·9672	10
11	1·3842	1·4028	1·4600	1·5395	1·6229	1·7103	1·8021	1·8983	1·9481	1·9992	2·1049	11
12	1·4258	1·4467	1·5111	1·6010	1·6959	1·7959	1·9012	2·0122	2·0699	2·1291	2·2522	12
13	1·4685	1·4919	1·5640	1·6651	1·7722	1·8857	2·0058	2·1329	2·1993	2·2675	2·4098	13
14	1·5126	1·5385	1·6187	1·7317	1·8519	1·9799	2·1161	2·2609	2·3367	2·4149	2·5785	14
15	1·5580	1·5866	1·6753	1·8009	1·9353	2·0789	2·2325	2·3966	2·4828	2·5718	2·7590	15
16	1·6047	1·6362	1·7340	1·8730	2·0224	2·1829	2·3558	2·5404	2·6379	2·7390	2·9522	16
17	1·6528	1·6623	1·7947	1·9479	2·1134	2·2920	2·4848	2·6928	2·8028	2·9170	3·1588	17
18	1·7024	1·7400	1·8575	2·0258	2·2085	2·4066	2·6215	2·8543	2·9760	3·1067	3·3799	18
19	1·7535	1·7944	1·9225	2·1068	2·3079	2·5270	2·7656	3·0256	3·1641	3·3086	3·6165	19
20	1·8061	1·8505	1·9898	2·1911	2·4117	2·6533	2·9178	3·2071	3·3619	3·5236	3·8697	20
21	1·8603	1·9083	2·0594	2·2788	2·5202	2·7860	3·0782	3·3996	3·5720	3·7527	4·1406	21
22	1·9161	1·9679	2·1315	2·3697	2·6337	2·9253	3·2475	3·6035	3·7952	3·9966	4·4304	22
23	1·9736	2·0294	2·2061	2·4647	2·7522	3·0715	3·4262	3·8197	4·0324	4·2564	4·7405	23
24	2·0328	2·0928	2·2833	2·5633	2·8760	3·2251	3·6146	4·0489	4·2844	4·5331	5·0724	24
25	2·0938	2·1582	2·3632	2·6658	3·0054	3·3864	3·8134	4·2919	4·5522	4·8277	5·4274	25
26	2·1566	2·2257	2·4460	2·7725	3·1407	3·5557	4·0231	4·5494	4·8367	5·1415	5·8074	26
27	2·2213	2·2952	2·5316	2·8834	3·2820	3·7335	4·2444	4·8223	5·1390	5·4757	6·2139	27
28	2·2879	2·3670	2·6202	2·9987	3·4297	3·9201	4·4778	5·1117	5·4602	5·8316	6·6488	28
29	2·3566	2·4409	2·7119	3·1187	3·5840	4·1161	4·7241	5·4184	5·8015	6·2107	7·1143	29
30	2·4273	2·5172	2·8068	3·2434	3·7453	4·3219	4·9840	5·7435	6·1641	6·6144	7·6123	30

ANNEXURE B.

AMOUNT OF ANNUITY OF RE. 1 IMPROVED AT COMPOUND INTEREST IN A GIVEN NUMBER OF YEARS.

Years	3 per cent	3½ per cent	3¾ per cent	4 per cent	4¼ per cent	5 per cent	5½ per cent	6 per cent	6¼ per cent	6½ per cent	7 per cent	Years
1	1.0000	1·0000	1·0000	1·0000	1·0000	1 0000	1.0000	1·0000	1·0000	1·0000	1·0000	1
2	2·0300	2·0313	2·0350	2·0400	2·0450	2·0500	2·0550	2·6000	2·0625	2·0650	2·0700	2
3	3·0909	3·0347	3·1062	3·1216	3·1370	3·1525	3·1680	3·1836	3·1914	3·1992	3·2149	3
4	4·1836	4·1914	4·2149	4·2465	1 2782	4 3101	4·3423	4·3746	4·3909	4·4072	4·4399	4
5	5·3091	5·3224	5 3625	5·4163	5·4707	5·5256	5·5811	5·6371	5·6653	5·6936	5·7507	5
6	6·4684	6·4887	6·5502	6·6330	6·7169	6·8019	6·8881	6·9753	7·0194	7·0637	7·1533	6
7	7·6625	7·6915	7·7794	7·8983	8·0192	8·1420	8·2669	8·3938	8·4581	8·5229	8·6540	7
8	8·8923	8·9319	9·0517	9·2142	9·3800	9·5491	9·7216	9·8975	9·9867	10·0769	10·2598	8
9	10·1591	10·2110	10·3685	10·5828	10·8021	11·0266	11·2563	11·4913	11·6109	11·7319	11·9780	9
10	11·4639	11·5301	11·7314	12·0061	12·2882	12·5779	12·8754	13·1808	13·3366	13·4944	13·8164	10
11	12·8078	12·8904	13·1420	13·4864	13·8412	14·2068	14·5835	14·9716	15·1701	15·3716	15·7836	11
12	14·1920	14·2932	14·6020	15·0258	15·4640	15·9171	16·3856	16·8699	17·1182	17·3707	17 8885	12
13	15·6178	15·7399	16·1130	16·6268	17·1599	17·7130	18·2868	18·8821	19·1881	19·4998	20·1406	13
14	17.0863	17·2318	17·6770	18·2919	18·9321	19·5986	20·2926	21·0151	21·3874	21·7673	22·5505	14
15	18·5989	18·7703	19·2957	20·0236	20·7841	21·5786	22·4087	23·2760	23·7241	24·1822	25·1290	15
16	20·1569	20·3568	20·9710	21·8245	22·7193	23·6575	24·6411	25·6725	26·2069	26·7540	27·8881	16
17	21·7616	21·9930	22·7050	23·6975	24·7417	25·8404	26·9964	28·2129	28·8448	29·4930	30·8402	17
18	23·4144	23·6803	24·4997	25·6454	26·8551	28·1324	29·4812	30·9057	31·6476	32·4101	33·9990	18
19	25·1169	25·4203	26·3572	27·6712	29·0636	30·5390	32·1027	33·7600	34·6256	35·5167	37·3790	19
20	26·8704	27·2147	28·2797	29·7781	31·3714	33·0660	34·8683	36·7856	37·7897	38·8253	40·9955	20
21	29·6765	29·0651	30·2695	31·9692	33·7831	35·7193	37·7861	39·9927	41·1515	42·8490	44·8652	21
22	30·5368	30·9734	32·3289	34·2480	36·3034	38·5052	40·8643	43·3923	44·7235	46·1016	49·0057	22
23	32·4529	32·9413	34·4604	36·6179	38·9370	41·4305	44·1118	46·9958	48·5187	50·0982	53·4361	23
24	34·4265	34·9707	36·6665	39·0826	41·6892	44·5020	47·5380	50·8156	52·5511	54·3546	58·1767	24
25	36·4593	37·0636	38·9499	41·6459	44·5652	47·7271	51·1526	54·8645	56·8356	58·8877	63·2490	25
26	38·5530	39·2218	41·3131	44·3117	47·5706	51·1135	54·9660	59·1564	61·3878	63·7154	68·6765	26
27	40·7096	41·4475	43·7591	47·0842	50·7113	54·6691	58·9891	63·7058	66 2215	68·8569	24·4838	27
28	42·9309	43·7427	46 2906	49 9676	53·9933	58·4026	63·2335	68·5281	71·3635	74·3926	80·6977	28
29	45·2189	46·1097	48 9108	52·9663	57·4230	62·3227	67·7114	73·6398	76·8238	80·1642	87·3465	29
30	47·5754	48·5506	51·6227	56·0849	61·0071	66·4388	72·4355	79·0582	82·6253	86·3749	94·4608	30

Note.—The annual payment is assumed to be made at the end of each year.

ANNEXURE C.

ANNUITIES TO REPAY Rs. 100, I.E., ANNUAL INSTALMENT NECESSARY TO PAY OFF A LOAN OF Rs. 100 WITH INTEREST IN A GIVEN NUMBER OF YEARS.

Number of years	Interest at											Number of years
	3 per cent	3¼ per cent	3½ per cent	4 per cent	4½ per cent	5 per cent	5½ per cent	6 per cent	6¼ per cent	6½ per cent	7 per cent	
1	103·000	103·125	103·500	104·000	104·500	105·000	105·500	106·000	106·250	106·500	107·000	1
2	52·261	52·356	52·640	53·020	53·400	53·780	54·162	54·544	54·735	54 926	55·309	2
3	35·353	35·438	35·693	36·035	36·377	36·721	37·065	37·411	37·584	37·758	38·105	3
4	26·903	26·968	27·225	27·549	27·874	28·201	28·529	28·860	29·025	29·190	29·523	4
5	21·835	21·913	22·148	22·463	22·780	23·097	23·418	23·740	23·901	24·063	24·389	5
6	18·460	18·536	18·767	19·076	19·388	19·702	20·018	20·336	20·496	20·657	20·980	6
7	16·051	16·126	16·354	16·661	16·970	17·282	17·596	17·914	18·073	18·233	18·555	7
8	14·246	14·321	14·548	14·853	15·161	15·472	15·786	16·104	16.263	16·424	16·747	8
9	12·843	12·918	13·145	13·449	13·757	14·069	14·384	14·702	14·863	15·024	15·349	9
10	11·723	11·798	12·024	12·329	12·638	12·950	13·267	13·587	13·748	13·910	14·238	10
11	10·808	10·883	11·109	11·415	11·725	12·039	12 357	12·679	12·842	13·006	13·336	11
12	10·046	10·121	10·348	10·655	10 967	11·283	11·603	11·928	12·092	12·257	12·590	12
13	9·403	9·478	9·706	10·014	10·328	10·646	10·968	11·296	11·462	11·628	11·965	13
14	8·853	8·928	9·157	9·467	9·782	10·102	10·428	10·758	10 926	11·094	11·434	14
15	8·377	8·453	8·683	8.994	9·311	9·634	9·963	10·296	10 465	10·635	10·979	15
16	7·961	8·037	8·269	8·582	8·902	9·227	9·558	9·895	10·066	10·238	10·586	16
17	7·595	7·672	7·904	8·220	8·542	8·870	9·204	9·544	9·717	9·891	10·243	17
18	7·271	7·348	7·582	7·899	8·224	8·555	8·892	9·236	9·410	9·585	9·941	18
19	6·981	7·059	7·294	7·614	7·941	8·275	8·615	8·962	9·138	9·316	9·675	19
20	6·722	6·799	7·036	7·358	7·688	8·024	8·368	8·718	8·896	9·076	9·439	20
21	6·487	6·566	6·804	7·128	7·460	7·800	8·146	8·500	8·680	8·861	9·229	21
22	6·275	6·354	6·593	6·920	7·255	7·597	7·947	8·305	8·486	8·669	9·041	22
23	6·081	6·161	6·402	6·731	7·068	7·414	7·767	8·128	8·311	8·496	8·871	23
24	5·905	5·985	6·227	6·559	6·899	7·247	7·604	7·968	8·153	8·340	8·719	24
25	5·743	5·823	6·067	6·401	6·744	7·095	7·455	7 823	8·009	8·198	8·581	25
26	5·594	5·675	5·921	6·257	6·602	6·956	7·319	7·690	7·879	8·069	8·456	26
27	5·456	5·538	5·785	6·124	6·472	6·829	7·195	7 570	7·760	7·952	8·343	27
28	5·329	5·411	5·660	6·001	6·352	6·712	7·081	7·459	7·651	7·845	8·239	28
29	5·211	5·294	5·545	5·888	6·241	6·605	6·977	7·358	7·552	7·747	8·145	29
30	5·102	5·185	5·437	5·783	6·139	6·505	6·881	7·265	7·460	7·658	8·059	30

Note.—The annual payment is assumed to be made at the end of each year.

Examples showing how the Tables are to be used.

Q. (1) In what time will a loan of Rs. 300 with compound interest at 5 per cent per annum be paid off by an annuity of Rs. 22·242?

A. Initial interest on Rs. 300 at 5 per cent per annum is Rs. 15. The annuity promised is in excess of this amount by 7·242. Dividing the annuity by this excess (22·242÷7·242) we get 3·0712. The year against the corresponding No. in Annexure A is 23. The loan will therefore be paid off in 23 years.

Another mode of calculation.

If the annuity of Rs. 300 is 22·242, the annuity of Rs. 100 is 7·414. The corresponding figure in Annexure C is against 23 years. The loan will be paid off in 23 years.

Q. (2) What instalment will pay off Rs. 300 at 5 per cent compound interest per annum in 30 years.

A. A loan of Rs. 100 will be paid off in 30 years by an annual instalment of Rs. 6·505 (*Vide* Annexure C). Therefore Rs. 300 will be paid off by an instalment of thrice the amount (*i.e.*,) 19·515.
100:6·505: :300:19·515.

Q. (3) A raiyat wishes to pay an annuity of Rs. 19·515 for 30 years. To what loan will he be entitled?

A. An annuity of Rs. 6·505 for 30 years will pay off Rs. 100. (*Vide* Annexure C against 30 years). Therefore an annuity of Rs. 19·515 will pay off Rs. 300 which is the loan he is entitled to.
6·505 : 100 : : 19·515 : 300.

Q. (4) A man takes a loan of Rs. 300, but having failed to pay the annuity and an assessment of Rs. 5, his land is sold by Government at the end of 15 years for Rs. 200. What is the amount of loan due at the end of 15 years?

A. The initial interest on 300 is Rs. 15. This deducted from the annuity of Rs. 19·515 leaves an excess of Rs. 4·515. This multiplied by 21·578 (the figure in Annexure B against 15 years) amounts to Rs. 97·489 which is the sum paid off in 15 years. The balance of loan due is (300—97·489) *i.e.*, 202·511.

Q. (5) Adjust the purchase money of Rs. 200 and state what loan remains to be paid by the purchaser.

A. Out of the sum of Rs. 200 credit Rs. 5 to assessment and Rs. 19·515 to the annual instalment due for the 15th year. There remains a balance of (200—24·515) *i.e.*, Rs. 175·485. Credit it towards the principal of Rs. 202·511 due at the end of 15 years. This leaves a balance of Rs. 27·026 which has to be paid by the purchaser in the Revenue sale.

Q. (6) If the purchaser wishes to pay the balance due during all the remaining 15 years, what annuity will he have to pay?

A. The solution should be worked out according to example (2).
100 : 9·634 : : 27·026 : 2·603.

Q. (7) If the purchaser wants to continue the former annuity of Rs. 19·515. in how many years will he pay off the debt?

A. This should be worked according to example (1).

If the annuity for 27·026 is 19·515, the annuity for 100 is 71.

The next highest figure in Annexure C is 105·000, the number of years against which is 1. The debt will be paid off in the 2nd year.

Q. (8) State exactly what remains to be paid in the 2nd year.

A. The initial interest of the balance due *(i.e.,)* Rs. 27·026 is 1·351. The excess of annuity over this is (19·515—1·351) *i.e.*, Rs. 18·164. This multiplied by 1·000, the figure in Annexure B against the 1st year comes to 18·164. This deducted from 27·026 (balance due) leaves 8·862 which is to be paid in the 2nd year.

Q. (9) A loan of Rs. 300 is to be paid off in 30 years; but the payment of the instalment is to be deferred and to commence in the 5th year. What is the annuity required?

A. A loan at the beginning of the 5th year with interest will be Rs. 300×1·2155 (the figure in Annexure A against 4 years), *i.e.*, 364·650. This has to be paid off in 26 years. The solution may now be worked as in example (2) as follows:—

A loan of Rs. 100 will be paid off in 26 years by an annuity of Rs. 6·956. Therefore a loan of Rs. 364·650 will be paid off in 26 years by an annuity of Rs. 25·365.
100: 6·956: :364·650: 25·365.

ANNEXURE D.

TABLE FOR FRACTIONS OF A RUPEE.

Annas	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Pies																
0	·000	·063	·125	·188	·250	·313	·375	·438	·500	·563	·625	·688	·750	·813	·875	·938
1	·005	·068	·130	·193	·255	·318	·380	·443	·505	·568	·630	·693	·755	·818	·880	·943
2	·010	·073	·135	·198	·260	·323	·385	·448	·510	·573	·635	·698	·760	·823	·885	·948
3	·016	·079	·141	·204	·266	·329	·391	·454	·516	·579	·641	·704	·766	·829	·890	·954
4	·021	·084	·146	·209	·271	·334	·396	·459	·521	·584	·646	·709	·771	·834	·896	·959
5	·026	·089	·151	·214	·276	·339	·401	·464	·526	·589	·651	·714	·776	·839	·901	·964
6	·031	·094	·156	·219	·281	·344	·406	·469	·531	·594	·656	·719	·781	·844	·906	·969
7	·036	·099	·161	·224	·286	·349	·411	·474	·536	·599	·661	·724	·786	·849	·911	·974
8	·42	·105	·167	·230	·292	·355	·417	·480	·542	·605	·667	·730	·792	·855	·917	·980
9	·047	·110	·172	·235	·297	·360	·422	·485	·547	·610	672	·735	·797	·860	·922	·985
10	·052	·115	·177	·240	·302	·365	·427	·490	·552	·615	·677	·740	·802	·865	·927	·990
11	·057	·120	·182	·245	·307	·370	·432	·495	·557	·620	·682	·745	·807	·870	·932	·995